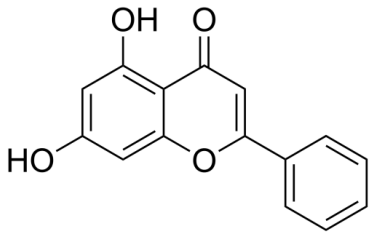
Data Sheet

Product Name:	Chrysin
Cat. No.:	CS-7531
CAS No.:	480-40-0
Molecular Formula:	$C_{15}H_{10}O_4$
Molecular Weight:	254.24
Target:	Estrogen Receptor/ERR
Pathway:	Vitamin D Related/Nuclear Receptor
Solubility:	DMSO : ≥ 100 mg/mL



BIOLOGICAL ACTIVITY:

Chrysin is one of the most well known **estrogen** blockers. IC50 & Target: estrogen ***In Vitro:*** Chrysin is mainly found in passion flowers, honey, and propolis acts as a potential therapeutic and preventive agent to inhibit proliferation and invasion of various human cancer cells. Although Chrysin has anti-carcinogenic effects in several cancers, little is known about its functional roles in ovarian cancer which shows poor prognosis and chemoresistance to traditional therapeutic agents. Chrysin inhibits ovarian cancer cell proliferation and induced cell death by increasing reactive oxygen species (ROS) production and cytoplasmic Ca^{2+} levels as well as inducing loss of mitochondrial membrane potential (MMP). Chrysin activates MAPK and PI3K/AKT pathways in ES2 and OV90 cells in concentration-response experiments. Chrysin suppresses tumor growth byregulating canonical Wnt and nuclear factor NF-κB signaling cascades cancer cells. Chrysin stimulates the phosphorylation of AKT and P70S6K proteins in both ES2 and OV90 cells compared tothe untreated control cells. In addition, Chrysin activates the phospho-ERK1/2, p38,and JNK proteins as members of the MAPK pathway in the ovarian cancer cells[1].

PROTOCOL (Extracted from published papers and Only for reference)

Cell Assay: [1]The proliferation assays are conducted using a cell proliferation enzyme-linked immunosorbent assay (ELISA) 5-bromo-2'-deoxyuridine (BrdU) kit. Briefly, ES2 and OV90 cells are seeded in a 96-well plate, and then treated with Chrysin (0, 5, 10, 20, 50, and 100 μM) with or without inhibitors (20 μM LY294002, PI3K/AKT; 10 μM U0126, ERK1/2; 10 μM SP600125, JNK; and 20 μ M SB203580, p38) in a final volume of 100 μL/well. Aftera48-h incubation, 10 μM BrdU is added to the cell culture, followed by an additional 2-h incubation at 37°C. After labeling the cells with BrdU, they are fixed and then incubated with the anti-BrdU-peroxidase (POD) working solution for 90 min. The anti-BrdU-POD binds to the BrdU incorporated into newly synthesized cellular DNA and these immune complexes are detected by analyzing their reaction with the 3,3',5,5'-tetramethylbenzidine (TMB) substrate. The absorbance values of the reaction product are measured at 370 and 492 nm using an ELISA reader[1].

References:

[1]. Lim W, et al. Chrysin Attenuates Progression of Ovarian Cancer Cells by Regulating Signaling Cascades and Mitochondrial Dysfunction. J Cell Physiol. 2017 Aug 17.

CAIndexNames:

4H-1-Benzopyran-4-one, 5,7-dihydroxy-2-phenyl-

SMILES:

OC1=C2C(OC(C3=CC=CC=C3)=CC2=O)=CC(O)=C1

Caution: Product has not been fully validated for medical applications. For research use only.

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